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# 8P Special Purpose Plugs and Receptacles

## Application

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### Application:

Special purpose plugs and receptacles listed in this section are for use in non-hazardous areas, where environmental or application considerations require non-standard plugs and receptacles. Included in this section are ARK-trol® plugs and receptacles (RPC and RPE).

### ARK-trol Plugs and Receptacles (RPC and RPE)

- Are used with a wide range of equipment requiring a variety of contact configurations under conditions of hard usage and exposure to rigorous environments.

- Two basic types: RPC – circuit breaking power connectors; RPE – control circuit, power and welding connectors.

RPC – A variety of configurations (with a maximum of five-poles) are available for one and three-phase circuits. Electrical range is 30, 60, 100, 200 amperes at a maximum of 600 vac.

RPE – A wider range of configurations are available. Range of amperages available up to 500 amperes at a maximum of 600 vac.

Both types are available (either as standard or as option) with solder well terminals for high reliability, or crimp or pressure terminals for ease of installation. Listings on pages 1096 to 1105, show complete assemblies with mating plugs and components. For information on features, options, components and complete assemblies, see pages 1093 to 1095.

## RPC Circuit Breaking Power Connectors RPE Control Circuit and Power Connectors

### Application:

ARK-trol RPC circuit breaking power connectors and RPE control circuit power connectors are used:

- with a wide variety of portable electrical equipment
- for connection of devices ranging from simple lighting units, power tools, and similar portables requiring only a power supply circuit, to sophisticated control and instrumentation assemblies requiring disconnect
- under conditions of hard usage and where exposed to dust, dirt, water, corrosion and chemical attack, providing high reliability and trouble-free service
- indoors or outdoors in non-hazardous areas of petroleum refineries, chemical and petrochemical plants, manufacturing plants, military installations and similar locations
- on machine tools and similar equipment

### Features:

- All ARK-trol connectors have the same properties, characteristics and environmental capabilities outlined under "Compliances."

### Construction:

- All ARK-trol plug, receptacle and cord connector shell parts are of high-strength impact extruded aluminum, hard coated with a high density anodize finish. The resultant assemblies are light weight, extremely strong, free from surface defects and flaws, and with superior resistance to abrasion, corrosion and chemical attack.
- "Tri-Disc" insert assemblies consist of two rigid insulators with a silicone rubber wafer between to provide a cushioning action against mechanical damage and to effect a positive seal against penetration by water, moisture, dust, gas and other undesirable matter. Assembly of the inserts compresses the silicone wafer to seal against the inner wall of the plug or receptacle shell, and around each individual contact.
- ARK-trol insulating material is of high dielectric and mechanical strength with low moisture absorption and excellent resistance to arc tracking. Socket contacts are each enclosed in a separate chamber in the silo insulator. Arcs formed while making or breaking a circuit are quickly snuffed out in the chambers.
- Contacts are removable and, for ease of installation, are snapped into the insert assemblies after wire termination. Termination methods employed are solder, crimp and pressure. Solder well contacts are standard and are furnished unless otherwise specified. Crimp contacts are available in all sizes and configurations. Pressure contacts, due to increased terminal area, are available only in certain assemblies as shown in the listings.

- For cable strain relief and watertight seal, plugs and cord connector receptacles are provided with gland nut and tapered Neoprene bushing.

### Positive Polarization:

- Polarization of ARK-trol connectors is such that plugs and receptacles cannot be mated incorrectly.
- Insert assemblies must be correctly aligned and will fit plug and receptacle shells in one position only, because of a raised key on the inner wall of the shells.
- Seven keys on the inner wall of the receptacle and seven mating keyways on the outer diameter of the plug shell are spaced so that the plug and receptacle can be mated in one position only. One key and one keyway are larger than the other six as a guide to rapid connection, easily performed under adverse field conditions – even in total darkness.

### Interchangeability:

- Shell components and insert assemblies in each diameter are interchangeable. Both male and female basic shells will accept either pin or socket inserts. This feature permits the use of both plug and receptacle in either an energized or de-energized condition.

### Grounding:

- Grounded connectors have pin and socket contacts with integral grounding straps which press against the inner wall of plug, receptacle and cord connector shells, effectively bonding the shells to the grounding contacts.
- Grounding socket contacts are longer than current carrying contacts to make first and break last, assuring a positive ground before circuits are energized and after circuits are de-energized.

### Standard Materials:

- Back boxes and adapters – copper-free aluminum
- Plug, receptacle and cord connector shells – impact extruded aluminum
- Insulation – diallyl phthalate (DAP)
- Insulation – fiberglass-reinforced polyester material
- Sealing wafer – silicone rubber
- Contacts – hard drawn copper

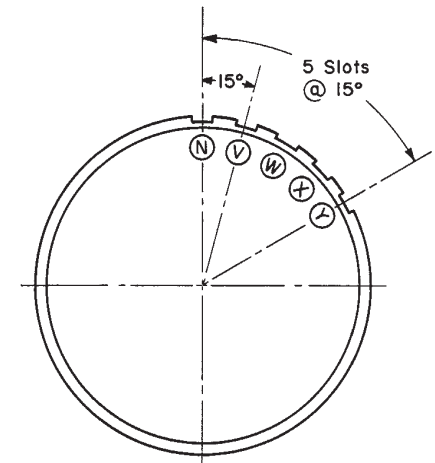
### Standard Finishes:

- Copper-free aluminum – natural
- Impact extruded aluminum – hard coat anodized
- Diallyl phthalate – natural (blue)
- Fiberglass-reinforced polyester material – natural (red)
- Silicone – natural (grey)
- Copper – silver plated

### Options:

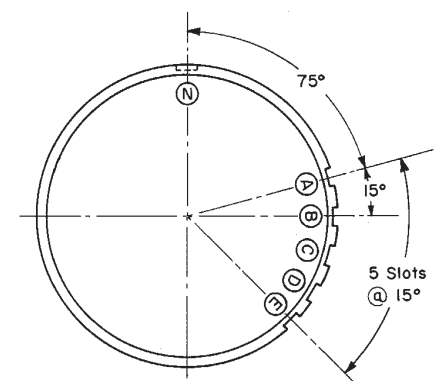
- Alternate polarities – ungrounded connectors. Standard polarity is position "N" shown below. Alternate positions "V", "W", "X" or "Y" can be furnished. To order, substitute for the letter "N" in the listed Cat. No., the letter for the desired polarization.

Example: RPC217-127-SO1N-ARE23 with polarity "X" becomes RCP217-127-SO1X-ARE23.



- Alternate polarities – grounded connectors. Standard polarity is position "A" shown below. Alternate positions "B", "C", "D" or "E" can be furnished. To order, substitute for the letter "A" in the listed Cat. No., the letter for the desired polarization.

Example: RPC217-127-SO2A-ARE23 with polarity "D" becomes RCP217-127-SO2D-ARE23.



RPC Circuit Breaking Power Connectors  
RPE Control Circuit and Power Connectors

**Options** (continued):

• Crimp type contacts – available on all assemblies with solder well contacts. To order, add letter “T” to Cat. No., immediately following polarity letter.

Examples: RPC217-127-S01N-ARE23 and RPC217-127-S02A-ARE23 except with crimp contacts would be ordered as RPC217-127-S01NT-ARE23 and RPC217-127-S02AT-ARE23 respectively.

• Alternate cable strain relief methods for plugs and connectors:

Stainless steel wire mesh cord grip. To order, add letter “K” to first section of Cat. No.

Example: RPC117-150-P01N with wire mesh grip would be ordered as RPCK117-150-P01N.



Adapter for use with liquid tight/rigid conduit. To order, add letters “LT” to first section of catalog number.

Example: RPC117-150-P01N with liquid tight/conduit adapter would be ordered as RPCLT117-150-P01N.

**Electrical Rating Ranges:**

- Voltage – 250, 480 and 600vac
- Frequency – 50\*\* to 400 hertz
- See listings for specific ratings.

**Ampere Ratings:**

- Ratings given in the table at right are applicable to RPC circuit breaking power connectors and RPE control connectors, as indicated.
- RPC connectors are capable of making or breaking circuits at the full rated load indicated in the table on the listing pages.
- Contact assemblies of RPE connectors have the current carrying capabilities shown in the table, as defined by applicable military specifications (MS) and NEC requirements, for circuits not made or broken under load. It should be noted that these non-interrupting ampere ratings exceed the NEC rating of the corresponding wire size.

Contact Size AWG	NEC Rating	RPE Connectors	
		Non-Interrupting Ampere Rating MS(AN)	NEC
#16		22	16
#12	20A	41	30
#10	30A	57	40
#4	60A	135	90
1/0	100A	250	160
4/0	200A	335	225

**Certifications and Compliances:**

• **Properties**

Industrial use

Driptight

Weather resistant

(weatherproof)

Watertight

Dust tight

Chemical resistance

Pressure

• **Compliance with Military Specifications**

**Environment**

Corrosion resistance

Temperature

Air leakage

Dust resistance

Shock resistance

Vibration

Humidity & moisture

ANSI/UL Standard

**Characteristics**

excludes dust, lint, fibers and flying, oil seepage and coolant seepage – meets J.I.C. Standard

excludes falling moisture or dirt – materials unaffected by condensation

performs normally in outdoor areas

excludes water by hose spray or stream

excludes dust, but performs normally if dust is accidentally enclosed during disconnect

high resistant to alkalis, strong caustics, acids, petroleum base and organic solvents

300 psi external – 200 psi internal

**Performance Data**

salt spray 300 days. MIL-STD-810E

–80°F to 275°F, meeting requirements of MIL-STD-810E

exceeds Class E specification MIL-STD-810E

exceeds requirements of MIL-STD-810E

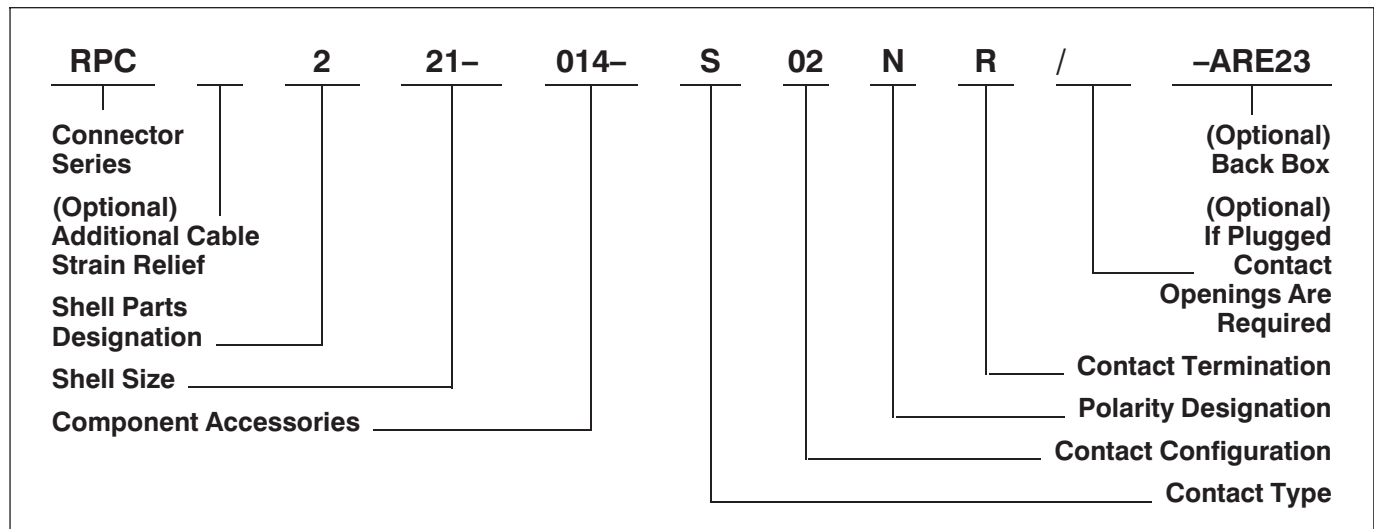
50G exceeds MIL-STD-810E

exceeds 20G, method II, MIL-STD-810E

exceeds Class E specification MIL-STD-810E

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\*\* For use on system less than 60 hertz the receptacles, plugs and connectors are for disconnect use only.



### CONNECTOR SERIES

RPC – circuit breaking  
 RPE – for disconnect use only  
 RPX – hazardous (gasoline or equivalent hazards, see Section 9P)

### ADDITIONAL CABLE STRAIN RELIEF (Optional)

K = Wire mesh cord grip  
 LT = Liquidtight/conduit connection

### SHELL PARTS DESIGNATION

0 = No shell part required  
 1 = Plug shell  
 2 = Receptacle  
 3 = Cord connector  
 4 = Connector handle body only  
 5 = Plug shell (long)  
 6 = Receptacle (long)  
 7 = Cord connector (long)

### SHELL SIZE

Inside Diameter measured in X/16" (017, 021, 033, 041, i.e., 017 shell size = 17/16")

### COMPONENT ACCESSORIES

This code indicates the combination of shell parts to fit your application; e.g., 014 = square flanged receptacle with insert retaining nut and dust cap; 150 = plug handle body, bushing, and clamping nut for cable with a diameter of .250 to .625.

### CONTACT TYPE

P = Pin (male)  
 S = Socket (female)

### CONTACT CONFIGURATION

This assigned code indicates the actual configuration of the contacts (pin and socket) in the insert assembly for a particular shell size. This is based upon electrical ratings (amperage and voltage) and the number of contacts required. It does **not** indicate the number of contacts in the configuration.

### POLARITY DESIGNATION

N = Standard position – ungrounded  
 V, W, X or Y = Alternate positions – (ungrounded)  
 A = Standard position – grounded  
 B, C, D or E = Alternate positions – (grounded)

### CONTACT TERMINATION

Blank = Solder well (standard unless noted)  
 R = Pressure (See complete ordering information that follows for availability)  
 T = Crimp (available in all configurations)

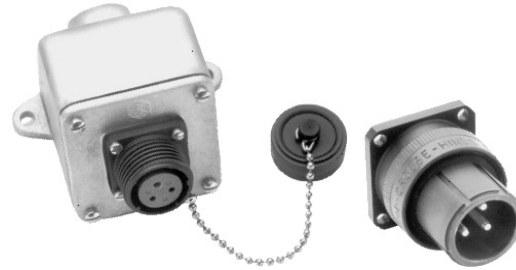
### PLUGGED CONTACT OPENINGS (Optional)

This option allows greater flexibility, allowing for unique wiring requirements. The number following the slash indicates the total number of *contacts* that will be supplied (including ground contact, if applicable); all other openings in the insert assembly will be plugged.

### BACK BOXES (Optional)

See page 1107 for back box information.

RPC Circuit Breaking Power Connectors  
With Solder Well Terminals ①



Square Flanged Receptacle,  
Dust Cap and Back Box  
Cat. # (For Surface  
Mounting) ②, ③

Motor Plug with  
Dust Cap  
Cat. #

	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size			
<b>20 AMPS</b> Grounded	4w, 5p	480	#12	017	3/4 1	RPC217-014-S09A-ARE23 RPC217-014-S09A-ARE33	RPC117-157-P09A	
	Ungrounded	5w, 5p	480	#12	017	3/4 1	RPC217-014-S08N-ARE23 RPC217-014-S08N-ARE33	RPC117-157-P08N
<b>30 AMPS</b> Grounded	2w, 3p	480	#10	017	3/4 1	RPC217-014-S02A-ARE23 RPC217-014-S02A-ARE33	RPC117-157-P02A	
	3w, 4p	480	#10	017	3/4 1	RPC217-014-S04A-ARE23 RPC217-014-S04A-ARE33	RPC117-157-P04A	
	4w, 5p	480	#10	021	3/4 1	RPC221-014-S17A-ARE23 RPC221-014-S17A-ARE33	RPC121-157-P17A	
	Ungrounded	3w, 3p	480	#10	017	3/4 1	RPC217-014-S01N-ARE23 RPC217-014-S01N-ARE33	RPC117-157-P01N
		4w, 4p	480	#10	017	3/4 1	RPC217-014-S03N-ARE23 RPC217-014-S03N-ARE33	RPC117-157-P03N
		5w, 5p	480	#10	021	3/4 1	RPC221-014-S16N-ARE23 RPC221-014-S16N-ARE33	RPC121-157-P16N
<b>60 AMPS</b> Grounded	3w, 4p	600	#4	033	1 1/4 1 1/2	RPC233-014-S08A-ARE46 RPC233-014-S08A-ARE56	RPC133-157-P08A	
	4w, 5p	480	#4	033	1 1/4 1 1/2	RPC233-014-S09A-ARE46 RPC233-014-S09A-ARE56	RPC133-157-P09A	
	Ungrounded	4w, 4p	600	#4	033	1 1/4 1 1/2	RPC233-014-S05N-ARE46 RPC233-014-S05N-ARE56	RPC133-157-P05N
		5w, 5p	480	#4	033	1 1/4 1 1/2	RPC233-014-S06N-ARE46 RPC233-014-S06N-ARE56	RPC133-157-P06N

## RPC Circuit Breaking Power Connectors With Solder Well Terminals ①



Cable Diameter Range	Cord Connector Cat. # ④	Plug Cat. # ④
.250 to .625	RPC317-160-S09A	RPC117-150-P09A
.625 to .875	RPC317-161-S09A	RPC117-151-P09A
.250 to .625	RPC317-160-S08N	RPC117-150-P08N
.625 to .875	RPC317-161-S08N	RPC117-151-P08N
.250 to .625	RPC317-160-S02A	RPC117-150-P02A
.625 to .875	RPC317-161-S02A	RPC117-151-P02A
.250 to .625	RPC317-160-S04A	RPC117-150-P04A
.625 to .875	RPC317-161-S04A	RPC117-151-P04A
.625 to 1.000	RPC321-161-S17A	RPC121-151-P17A
1.000 to 1.187	RPC321-395-S17A	RPC121-387-P17A
.250 to .625	RPC317-160-S01N	RPC117-150-P01N
.625 to .875	RPC317-161-S01N	RPC117-151-P01N
.250 to .625	RPC317-160-S03N	RPC117-150-P03N
.625 to .875	RPC317-161-S03N	RPC117-151-P03N
.625 to 1.000	RPC321-161-S16N	RPC121-151-P16N
1.000 to 1.187	RPC321-395-S16N	RPC121-387-P16N
.875 to 1.375	RPC333-163-S08A	RPC133-153-P08A
1.375 to 1.625	RPC333-396-S08A	RPC133-388-P08A
1.625 to 1.875	RPC333-397-S08A	RPC133-389-P08A
.875 to 1.375	RPC333-163-S09A	RPC133-153-P09A
1.375 to 1.625	RPC333-396-S09A	RPC133-388-P09A
1.625 to 1.875	RPC333-397-S09A	RPC133-389-P09A
.875 to 1.375	RPC333-163-S05N	RPC133-153-P05N
1.375 to 1.625	RPC333-396-S05N	RPC133-388-P05N
1.625 to 1.875	RPC333-397-S05N	RPC133-389-P05N
.875 to 1.375	RPC333-163-S06N	RPC133-153-P06N
1.375 to 1.625	RPC333-396-S06N	RPC133-388-P06N
1.625 to 1.875	RPC333-397-S06N	RPC133-389-P06N

### FOOTNOTES:

- ① Solder well terminals provided as standard. Crimp contacts are optionally available, add suffix T to catalog number. Example: RPC217-014-S09AT-ARE23.
- ② For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC217-127-S09A-ARE23.
- ③ For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC217-014-S09A.
- ④ For plugs and cord connectors:

**LIQUIDTIGHT/CONDUIT ADAPTER** – To order with adapter, add letters “LT” to first section of catalog number. Example: RPCLT317-160-S09A.

### ADDITIONAL CABLE STRAIN RELIEF OPTIONS –

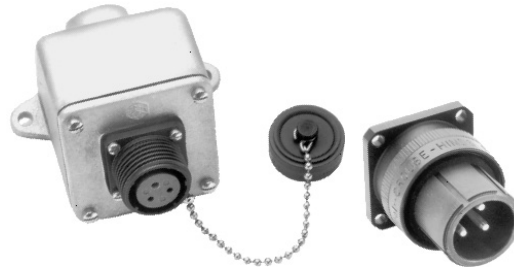
- Stainless steel wire mesh grip – To order, add letter “K” to first section of catalog number. Example: RPCK317-160-S09A.

NOTE: RPC with pressure terminals are shown on pages 1100 through 1103.

# ARK-trol Electrical Connectors

## RPC Circuit Breaking Power Connectors With Solder Well Terminals ①

Raintight



	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting) ②, ③	Motor Plug Cat. #
<b>100 AMPS</b>							
Grounded	4w, 5p	600	1/8	041	1½ 2	RPC641-014-S04A-AJ57 RPC641-014-S04A-AJ67	RPC541-157-P04A
Ungrounded	5w, 5p	600	1/8	041	1½ 2	RPC641-014-S02N-AJ57 RPC641-014-S02N-AJ67	RPC541-157-P02N
<b>200 AMPS</b>							
Grounded	3w, 4p	480	3/8	041	2 2½	RPC641-014-S10A-AJ68 RPC641-014-S10A-AJ78	RPC541-157-P10A



## RPC Circuit Breaking Power Connectors With Solder Well Terminals ①



Cable Diameter Range	Cord Connector Cat. # ④	Plug Cat. # ④
1.375 to 1.875	RPC741-164-S04A	RPC541-154-P04A
1.875 to 2.062	RPC741-398-S04A	RPC541-390-P04A
2.062 to 2.250	RPC741-399-S04A	RPC541-391-P04A
1.375 to 1.875	RPC741-164-S02N	RPC541-154-P02N
1.875 to 2.062	RPC741-398-S02N	RPC541-390-P02N
2.062 to 2.250	RPC741-399-S02N	RPC541-391-P02N
1.375 to 1.875	RPC741-164-S10A	RPC541-154-P10A
1.875 to 2.062	RPC741-398-S10A	RPC541-390-P10A
2.062 to 2.250	RPC741-399-S10A	RPC541-391-P10A

NOTE: RPC with pressure terminals are shown on pages 1100 through 1103.

### FOOTNOTES:

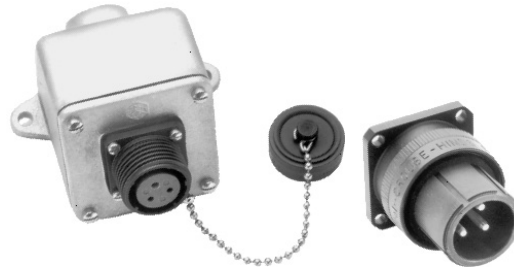
- ① Solder well terminals provided as standard. Crimp contacts are optionally available, add suffix T to catalog number. Example: RPC217-014-S09AT-ARE23.
- ② For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC217-127-S09A-ARE23.
- ③ For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC217-014-S09A.
- ④ For plugs and cord connectors:

**LIQUIDTIGHT/CONDUIT ADAPTER** – To order with adapter, add letters “LT” to first section of catalog number. Example: RPCLT317-160-S09A.

### ADDITIONAL CABLE STRAIN RELIEF OPTIONS –

- Stainless steel wire mesh grip – To order, add letter “K” to first section of catalog number. Example: RPCK317-160-S09A.

## RPC Circuit Breaking Power Connectors With Pressure Terminals



	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting) ①, ②	Motor Plug Cat. #
<b>30 AMPS</b>							
Grounded	2w, 3p	600	#10	021	3/4 1	RPC221-014-S04AR-ARE23 RPC221-014-S04AR-ARE33	RPC121-157-P04AR
Ungrounded	3w, 3p	600	#10	021	3/4 1	RPC221-014-S02NR-ARE23 RPC221-014-S02NR-ARE33	RPC121-157-P02NR
<b>60 AMPS</b>							
Grounded	3w, 4p	600	#4	033	1 1/4 1 1/2	RPC233-014-S08AR-ARE46 RPC233-014-S08AR-ARE56	RPC133-157-P08AR
	4w, 5p	480	#4	033	1 1/4 1 1/2	RPC233-014-S09AR-ARE46 RPC233-014-S09AR-ARE56	RPC133-157-P09AR
Ungrounded	4w, 4p	600	#4	033	1 1/4 1 1/2	RPC233-014-S05NR-ARE46 RPC233-014-S05NR-ARE56	RPC133-157-P05NR
	5w, 5p	480	#4	033	1 1/4 1 1/2	RPC233-014-S06NR-ARE46 RPC233-014-S06NR-ARE56	RPC133-157-P06NR

† For alternate polarizations, see "Options" on page 1093.

# ARK-trol Electrical Connectors

## RPC Circuit Breaking Power Connectors With Pressure Terminals

Raintight

8P



Cable Diameter Range	Cord Connector Cat. # ③	Plug Cat. # ③
.250 to .625 .625 to 1.000	RPC321-160-S04AR RPC321-161-S04AR	RPC121-150-P04AR RPC121-151-P04AR
.250 to .625 .625 to 1.000	RPC321-160-S02NR RPC321-161-S02NR	RPC121-150-P02NR RPC121-151-P02NR
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333-163-S08AR RPC333-396-S08AR RPC333-397-S08AR	RPC133-153-P08AR RPC133-388-P08AR RPC133-389-P08AR
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333-163-S09AR RPC333-396-S09AR RPC333-397-S09AR	RPC133-153-P09AR RPC133-388-P09AR RPC133-389-P09AR
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333-163-S05NR RPC333-396-S05NR RPC333-397-S05NR	RPC133-153-P05NR RPC133-388-P05NR RPC133-389-P05NR
.875 to 1.375 1.375 to 1.625 1.625 to 1.875	RPC333-163-S06NR RPC333-396-S06NR RPC333-397-S06NR	RPC133-153-P06NR RPC133-388-P06NR RPC133-389-P06NR

### FOOTNOTES:

- ① For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC221-127-S04AR-ARE23.
- ② For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC221-014-S04AR.
- ③ For plugs and cord connectors:

**LIQUIDTIGHT/CONDUIT ADAPTER** – To order with adapter, add letters “LT” to first section of catalog number. Example: RPCLT321-160-S04AR.

### ADDITIONAL CABLE STRAIN RELIEF OPTIONS –

- Stainless steel wire mesh grip – To order, add letter “K” to first section of catalog number. Example: RPCK321-160-S04AR.

# ARK-trol Electrical Connectors

## RPC Circuit Breaking Power Connectors With Pressure Terminals

Raintight



	Circuit Description	Volts (VAC)	Contact Size	Shell Size	Hub Size	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting) ①, ②	Motor Plug Cat. #
<b>100 AMPS</b>	Grounded	600	1/8	041	1 1/2 2	RPC641-014-S04AR-AJ57	RPC541-157-P04AR
						RPC641-014-S04AR-AJ67	
	Ungrounded	600	1/8	041	1 1/2 2	RPC641-014-S02NR-AJ57	RPC541-157-P02NR
						RPC641-014-S02NR-AJ67	

† For alternate polarizations, see "Options" on page 1093.

# ARK-trol Electrical Connectors

## RPC Circuit Breaking Power Connectors With Pressure Terminals

Raintight

8P



Cable Diameter Range	Cord Connector Cat. # ③	Plug Cat. # ③
1.375 to 1.875	RPC741-164-S04AR	RPC541-154-P04AR
1.875 to 2.062	RPC741-398-S04AR	RPC541-390-P04AR
2.062 to 2.250	RPC741-399-S04AR	RPC541-391-P04AR
1.375 to 1.875	RPC741-164-S02NR	RPC541-154-P02NR
1.875 to 2.062	RPC741-398-S02NR	RPC541-390-P02NR
2.062 to 2.250	RPC741-399-S02NR	RPC541-391-P02NR

### FOOTNOTES:

- ① For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPC221-127-S04AR-ARE23.
- ② For square flanged receptacle with dust cap for panel mounting, delete the last digits of the catalog number specifying the backbox. Example: RPC221-014-S04AR.
- ③ For plugs and cord connectors:

**LIQUIDTIGHT/CONDUIT ADAPTER** – To order with adapter, add letters “LT” to first section of catalog number. Example: RPCLT321-160-S04AR.

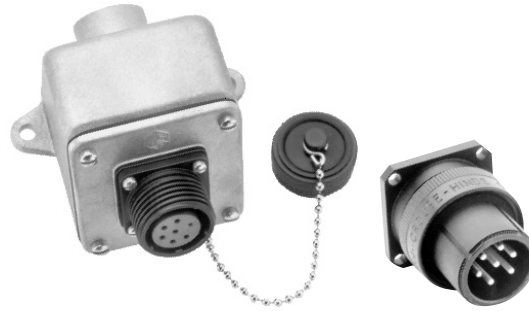
### ADDITIONAL CABLE STRAIN RELIEF OPTIONS –

- Stainless steel wire mesh grip – To order, add letter “K” to first section of catalog number. Example: RPCK321-160-S04AR.

# ARK-trol Electrical Connectors

## RPE Control Circuit and Power Connectors With Solder Well Terminals ①

Raintight



Square Flanged Receptacle,  
Dust Cap and Back Box  
Cat. # (For Surface  
Mounting) ②, ③

Motor Plug  
Cat. #

	Circuit Description	Contact Size	Amps	Volts (VAC)	Shell Size	Hub Size	Square Flanged Receptacle, Dust Cap and Back Box Cat. # (For Surface Mounting) ②, ③	Motor Plug Cat. #
<b>POWER</b>	1w, 1p	500 MCM	500	600	033	1½ 2	RPE633-014-S24N-AJ57 RPE633-014-S24N-AJ67	RPE533-157-P24N
<b>CONTROL</b>	6w, 7p	#12	20	480	017	¾ 1	RPE217-014-S06A-ARE23 RPE217-014-S06A-ARE33	RPE117-157-P06A
	7w, 7p	#12	20	480	017	¾ 1	RPE217-014-S05N-ARE23 RPE217-014-S05N-ARE33	RPE117-157-P05N
	12w, 12p	#16	16	250	017	¾ 1	RPE217-014-S07N-ARE23 RPE217-014-S07N-ARE33	RPE117-157-P07N
	18w, 19p	#12	20	250	021	¾ 1	RPE221-014-S08A-ARE23 RPE221-014-S08A-ARE33	RPE121-157-P08A
	19w, 19p	#12	20	250	021	¾ 1	RPE221-014-S09N-ARE23 RPE221-014-S09N-ARE33	RPE121-157-P09N
	38w, 39p	#12	20	250	033	1¼ 1½	RPE233-014-S19A-ARE46 RPE233-014-S19A-ARE56	RPE133-157-P19A
	39w, 39p	#12	20	250	033	1¼ 1½	RPE233-014-S17N-ARE46 RPE233-014-S17N-ARE56	RPE133-157-P17N

## RPE Control Circuit and Power Connectors With Solder Well Terminals



Cable Diameter Range	Cord Connector Cat. # ④	Plug Cat. # ④
1.375 to 1.625	RPE733-396-S24N	RPE533-388-P24N
1.625 to 1.875	RPE733-397-S24N	RPE533-389-P24N
.250 to .625	RPE317-160-S06A	RPE117-150-P06A
.625 to .875	RPE317-161-S06A	RPE117-151-P06A
.250 to .625	RPE317-160-S05N	RPE117-150-P05N
.625 to .875	RPE317-161-S05N	RPE117-151-P05N
.250 to .625	RPE317-160-S07N	RPE117-150-P07N
.625 to .875	RPE317-161-S07N	RPE117-151-P07N
.625 to 1.000	RPE321-161-S08A	RPE121-151-P08A
1.000 to 1.187	RPE321-395-S08A	RPE121-387-P08A
.625 to 1.000	RPE321-161-S09N	RPE121-151-P09N
1.000 to 1.187	RPE321-395-S09N	RPE121-387-P09N
.875 to 1.375	RPE333-163-S19A	RPE133-153-P19A
1.375 to 1.625	RPE333-396-S19A	RPE133-388-P19A
.875 to 1.375	RPE333-163-S17N	RPE133-153-P17N
1.375 to 1.625	RPE333-396-S17N	RPE133-388-P17N

### FOOTNOTES:

- ① Solder well terminals provided as standard. Crimp contacts are optionally available, add suffix T to catalog number. Example: RPE633-014-S24NT-AJ57.
- ② For square flanged receptacle *without* dust cap, change the middle three digits of the catalog number from 014 to 127. Example: RPE633-127-S24N-AJ57.
- ③ For square flanged receptacle with dust cap for panel mounting, delete the last three digits of the catalog number specifying the backbox. Example: RPE633-014-S24N.
- ④ For plugs and cord connectors:  
**LIQUIDTIGHT/CONDUIT ADAPTER** – To order with adapter, add letters “LT” to the first section of the catalog number. Example: RPELT733-396-S24N.

### ADDITIONAL CABLE STRAIN RELIEF OPTIONS –

- Stainless steel wire mesh grip – To order, add letter “K” to first section of the catalog number. Example: RPEK733-396-S24N.

# 8P RPC and RPE Connectors

## Accessories

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### FOR #16 THROUGH #10 CONTACTS:

The RPE017-440 crimping tool has been designed to crimp a wide range of solid and stranded type conductors. The crimping head is adjusted and sealed at the factory. The tool automatically crimps and gauges all size contacts without readjustment.



### CONTACT REMOVAL TOOLS:

The contact removal tool extracts the contact from the insert assembly without complete disassembly of the connector.

RPE017-402T for use with #16 contacts.  
RPE017-403T for use with #12 contacts.  
RPE017-404T for use with #10 contacts.

### DUST CAPS: For Receptacles For RPC or RPE Series



Dust Cap w/Eyelet for  
Receptacle Cat. #  
RPE017-009  
RPE021-009  
RPE033-009  
RPE041-009



For Mounting RPC and RPE Square Flanged Receptacles



FS Back box



ARE Back box



AJ Back box

## Back Boxes FS and FSC

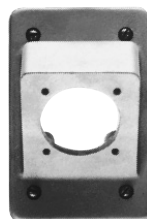
Hub Size	FS† Cat. #	FSC† Cat. #
1/2	FS1-SA	FSC1-SA
3/4	FS2-SA	FSC2-SA
1	FS3-SA	FSC3-SA

## ARE‡

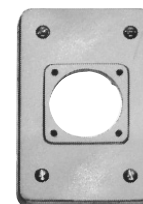
Hub Size	Cat. #	Rating
1/2	ARE13	30A
3/4	ARE23	
1	ARE33	
1	ARE36	60A
1 1/4	ARE46	
1 1/2	ARE56	

## AJ‡

Hub Size	Cat. #	Rating
1	AJ37	60A and 100A
1 1/4	AJ47	
1 1/2	AJ57	
2	AJ67	
1 1/2	AJ58	200A
2	AJ68	
2 1/2	AJ78	



45° Angle adapter



Flat adapter

## Adapters

### Shell Sizes of Square Flanged Receptacles

45° Angle		Flat	
017 Cat. #	021 Cat. #	017 Cat. #	021 Cat. #
RPE017-156	RPE021-156	RPE017-141	RPE021-142

### Shell Sizes of Square Flanged Receptacles

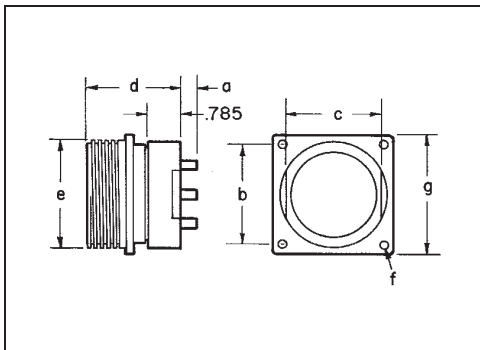
Flat			
017 Cat. #	021 Cat. #	033 Cat. #	041 Cat. #
RPE017-143	RPE021-144		
		RPE033-145	RPE041-146

### Shell Sizes of Square Flanged Receptacles

Flat	
033 Cat. #	041 Cat. #
RPE033-145	RPE041-146
	RPE041-147

† Any of the FS or FD single gang, two gang tandem or multiple gang boxes with individual cover openings may be used with these adapters. For listings, dimensions and other details refer to Section 3F.

‡ Other AR and AJ back boxes may be used with these adapters. For listings, dimensions and other details refer to Section 1P.



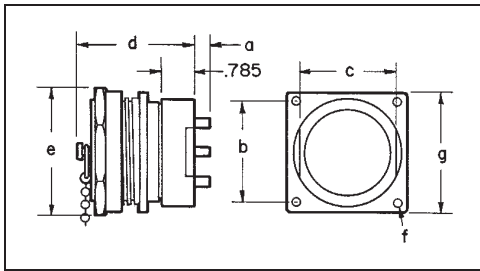
**Square Flanged Receptacle**

**Shell Type and Size**

	b	c	d	e	f	g
217	1.375	1.317	2.165	1.562	.190	1.750
221	1.750	1.692	2.165	2.000	.190	2.250
233	2.375	2.317	2.165	2.625	.214	2.875
241	2.813	2.817	2.165	3.187	.250	3.438
633	2.375	2.317	2.915	2.625	.214	2.875
641	2.813	2.817	2.915	3.187	.250	3.438

**Contact for AWG Wire**

a	
.1875	#16, #12, #10
.250	#4
.375	1/8
.500	1/4

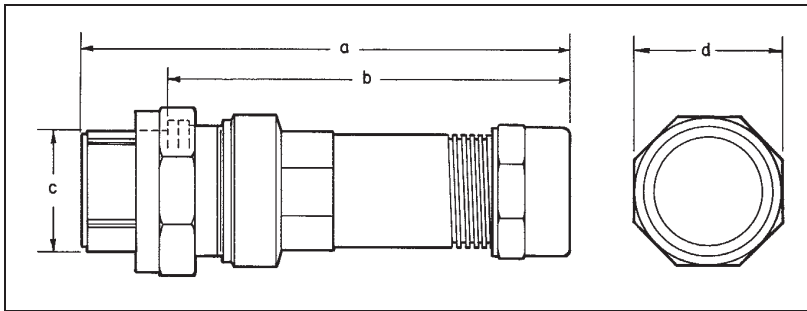


**Square Flanged Receptacle with Dust Cap**

**Shell Type and Size**

	b	c	d	e	f	g
217	1.375	1.317	2.812	1.927	.190	1.750
221	1.750	1.692	2.812	2.468	.190	2.250
233	2.375	2.317	2.812	3.145	.214	2.875
241	2.813	2.817	2.812	3.754	.250	3.438
633	2.375	2.317	3.552	3.145	.214	2.875
641	2.813	2.817	3.552	3.754	.250	3.438

NOTE: Dimension a – same as above



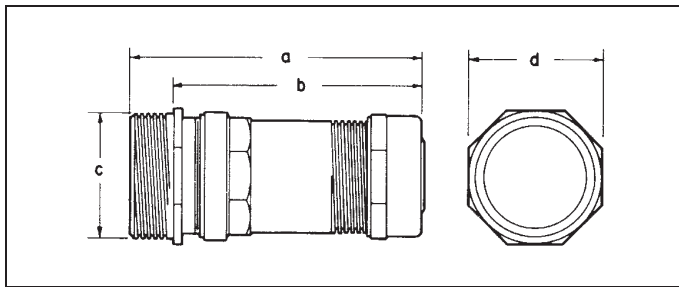
**Plug**

**Shell Type and Size**

	a†	b†	c	d
117	5.033	4.133	1.270	1.921
121	5.090	4.190	1.675	2.468
133	6.093	5.193	2.295	3.140
141	6.653	5.753	2.800	3.750
533	6.843	5.193	2.295	3.140
541	7.403	5.753	2.800	3.750

† These dimensions are approximate and vary with cable size.

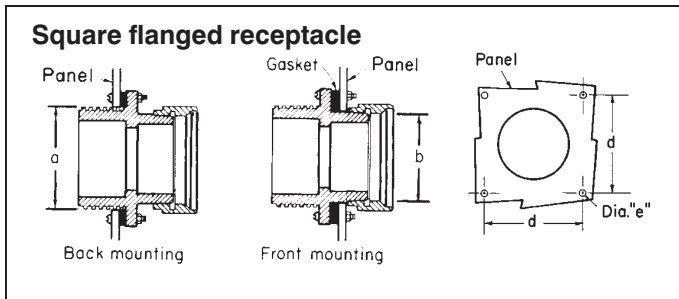
## RPC Circuit Breaking Power Connectors RPE Control Circuit and Power Connectors Dimensions



### Cord Connector Receptacle

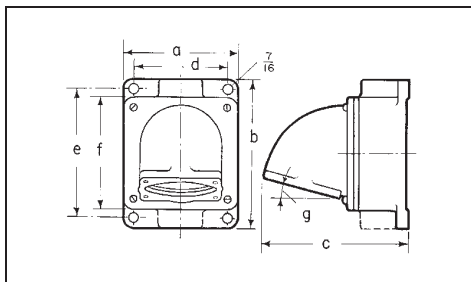
Shell Type and Size

Shell Type and Size	a†	b†	c	d
317	5.033	4.116	1.562	1.812
321	5.090	4.173	1.885	2.300
333	6.093	5.176	2.625	3.140
341	6.653	5.736	3.187	3.730
733	6.843	5.176	2.625	3.140
741	7.403	5.736	3.187	3.730



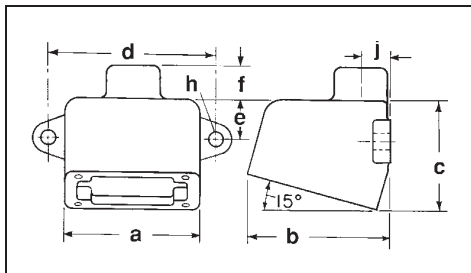
### Panel Mounting Methods

Shell Size	Back Mounting			Front Mounting		
	a	d	e	b	d	e
017	1 <sup>19</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>16</sub>	1 <sup>17</sup> / <sub>32</sub>	1 <sup>9</sup> / <sub>8</sub>	3 <sup>1</sup> / <sub>16</sub>
021	2 <sup>1</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>16</sub>	1 <sup>31</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>16</sub>
033	2 <sup>21</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	7 <sup>1</sup> / <sub>32</sub>	2 <sup>21</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	-7 <sup>1</sup> / <sub>32</sub>
041	3 <sup>7</sup> / <sub>32</sub>	2 <sup>13</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>	3 <sup>5</sup> / <sub>32</sub>	2 <sup>13</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>4</sub>



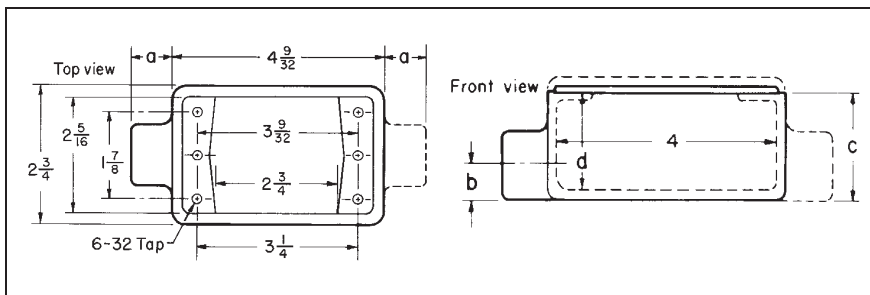
### AJ Back Boxes

Form	Size	a	b	c	d	e	f	g
C & D	3/4, 1, 1 1/4, 1 1/2	5 7/8	8	7 7/16	4 7/8	7	5 7/8	15°
C & D	2	5 7/8	8	8	4 7/8	7	5 7/8	15°
E	1 1/2, 2, 2 1/2	8	10 3/4	9 7/8	6 3/4	9 1/2	8	45°



### ARE Back Boxes

Form	Size	a	b	c	d	e	f	h dia.
B	1/2	3 3/8	3 3/8	2 3/4	4 1/4	1	2 7/32	1 1/32
B	3/4	3 3/8	3 3/8	2 3/4	4 1/4	1	2 7/32	1 1/32
B	1	3 3/8	3 3/8	2 3/4	4 1/4	1	3 1/32	1 1/32
C	1	4 1/4	4 1 1/16	4 1 1/16	5 1/4	1 5/8	1 5/16	3/8
C	1 1/4	4 1/4	4 1 1/16	4 1 1/16	5 1/4	1 5/8	1	3/8
C	1 1/2	4 1/4	4 1 1/16	4 1 1/16	5 1/4	1 5/8	1 1/16	3/8



### FS/FSC Boxes

Series	Hub Size	a	b	c	d
FS	1/2	7/8	5/8	1 7/8	1 11/16
	3/4	7/8	3/4	1 7/8	1 11/16
	1	1	7/8	1 7/8	1 11/16

† These dimensions are approximate and vary with cable size.